1-2015

SCN 100N.50: Issues in Biology

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SCN 100N: *Issues in Biology* **Online Course Syllabus, Spring, 2015**

Instructor: Gregory Peters greg.peters@mso.umt.edu (406) 207-6154

Text: Belk and Borden Maier. 2010. *Biology: Science for Life 4th ed.*

Course Description:
Issues in Biology explores introductory biology by examining core principles in the context of common, everyday issues. This course has been designed to promote understanding principles of biology for both general education and as a foundation for future health care professionals. We will examine the biology of issues such as cancer, population growth, human impacts on biodiversity, genetic engineering, and evolution.

Course Objectives:
- Understand and apply the scientific method of investigation
- Use critical thinking to evaluate scientific arguments related to issues in biology
- Understand fundamental biological concepts, laws, and theories
- Understand matter, energy, and organization in biological systems
- Identify patterns of interaction in living systems at different scales
- Understand the concepts of genetics and apply them in current issues
- Examine scientific literature and think critically about biology

Class schedule:
For a schedule of readings, assignments, exams, and due dates see the *Class Schedule* near the top of your Moodle page for this course.

Student assessment is based on:

1) 5 Exams	50%
2) Discussion Board participation (15 weeks)	30%
3) Biological Science Journal Summaries (5)	10%
4) Biology in the News Responses (5)	10%

Grading Scale:
A to A- = 100 - 90%
B+ to B- = 89 - 80%
C+ to C- = 79 - 70%
D+ to D- = 69 - 60%
F = below 60%

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Course Policies:

Assignments and Exams:
Assignments are listed in the Class Schedule and can be found in each weekly Topic when needed. All assignments are due on Fridays (before midnight) and all exams are offered between Thursday and Friday. You have about a week to submit assignments because content will be made available at some point during the weekend prior to each week's responsibilities. Your first discussion forum post each week is due by Wednesday.

Late assignments will not be accepted. Plan ahead for unexpected challenges.

Exams will be available only on the two days offered in the weekly topic. Exam dates are posted in the Class Schedule.

Exams may not be made-up without documentation of extreme circumstances. Plan accordingly.

Students with Disabilities:
Students with disabilities will receive appropriate accommodations. Please contact me and provide a letter from your DSS coordinator so that accommodations can be made.

Changes to grading format:
University policies on drops, adds, changes of grade option, or change to audit status will be enforced in this course. Please note that after the 45th day of the semester, such changes are NOT automatically approved; they may be requested by petition, but the petition must be accompanied by documentation of extenuating circumstances. Requests to drop a course or change the grade basis to benefit a student's grade point average will not be approved. A grade of C or higher will be considered a passing grade for the P/NP option.

SCN 100N: *Issues in Biology* online: Spring 2015 Class Schedule

Please Note:

a) Instructions and due dates for assignments can also be found each week in Moodle
b) Participation in the discussion forum is expected every week
c) Due dates are absolute
d) Exams can be taken at any time of day, but only on one of the two days offered

Week 1 (1/26-1/30) Biology as science
Assignments: 1) Read Chapter 1 (3-16, 21-24)
2) Participate in this week's Discussion Forum
3) Submit Journal Article Summary 1

Week 2 (2/2-2/6) Chemistry of Life; Cells
Assignments: 1) Read Chapter 2 (31-50)
2) Participate in this week's Discussion Forum
3) Submit Biology in the News Response 1

Week 3 (2/9-2/13) Nutrition and cell transport
Assignments: 1) Read Chapter 3 (56-69)
2) Participate in this week's Discussion Forum

EXAM 1: Chapters 1-3, Thursday 2/12 - Friday 2/13

Week 4 (2/16-2/20) Respiration and Photosynthesis
Assignments: 1) Read Chapter 4 (74-85) & 5 (93-103)
2) Participate in this week's Discussion Forum
3) Submit Journal Article Summary 2

Week 5 (2/23-2/27) Cancer
Assignments: 1) Read Chapter 6 (113-129)
2) Participate in this week's Discussion Forum
3) Submit Biology in the News Response 2

Week 6 (3/2-3/6) Intro to genetics
Assignments: 1) Read Chapter 7 (148-159) & 8 (175-178)
2) Participate in this week's Discussion Forum

EXAM 2: Chapters 4-8, Thursday 3/5 - Friday 3/6

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Week 7 (3/9-3/13) Gene expression; Genetic engineering

Assignments: 1) Read Chapter 9 (196-216)
2) Participate in the Discussion Forum
3) Submit Journal Article Summary 3

Week 8 (3/16-3/20) Evolution

Assignments: 1) Read Chapter 10 (222-238)
2) Participate in Discussion Forum
3) Submit Biology in the News Response 3

Week 9 (3/23-3/27) Evolution by natural selection

Assignments: 1) Read Chapter 11 (252-262; 266-270)
2) Participate in Discussion Forum

EXAM 3: Chapters 9-11, Thursday 3/26 - Friday 3/27

Spring Break (3/30-4/5) You have no responsibilities for our class this week.

Week 10 (4/6-4/10) Biodiversity; Classification of Life

Assignments: 1) Read Chapter 12 (276-280, 298-301)
2) Participate in Discussion Forum
3) Submit Journal Article Summary 4

Week 11 (4/13-4/17) Biodiversity; Classification of Life

Assignments: 1) Read Chapter 13 (307-332)
2) Participate in Discussion Forum
3) Submit Biology in the News Response 4

Week 12 (4/20-4/24) Human populations

Assignments: 1) Read Chapter 14 (339-352)
2) Participate in the Discussion Forum

EXAM 4 Chapters 12-14, Thursday 4/23 - Friday 4/24

Week 13 (4/27-5/1) Ecology: human impacts and interactions

Assignments: 1) Read Chapter 15 (358-379)
2) Participate in the Discussion Forum
3) Submit Journal Article Summary 5

Week 14 (5/4-5/8) Ecosystem Diversity, Humans and resources

Assignments: 1) Read Chapter 16 (390-414)
2) Participate in Discussion Forum
3) Submit Biology in the News Response 5

EXAM 5 Chapters 15-16, Thursday 5/7 - Friday 5/8

Finals week (5/11-5/15) Assignments: 1) Participate in Discussion Forum